



# Albit®

Improves Plant Growth and Stress Tolerance

## San Luis Valley Research Center

Established 1888

## Agricultural Experiment Station

Colorado  
State  
University



Potato Trial by Dr Samuel Y. C. Essah  
Colorado State University, CO 2017





# Albit®

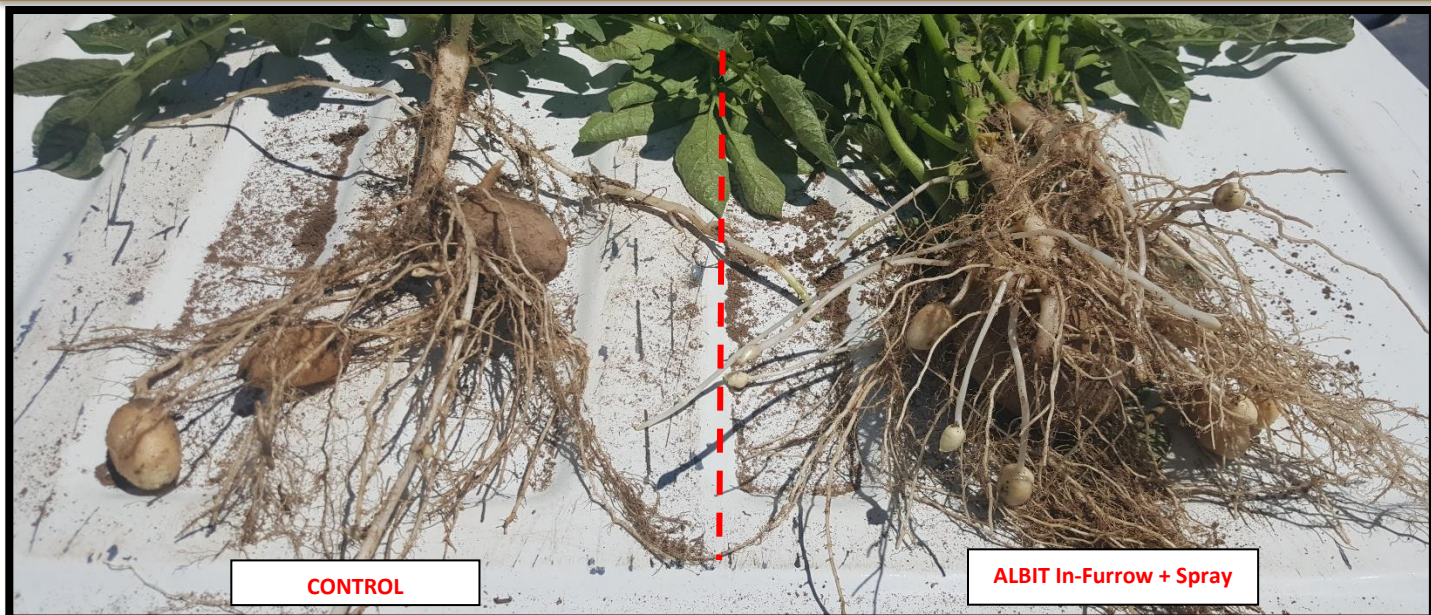
Improve Plant Growth and Stress Tolerance

...is an effective program on potatoes to enhance tuber development, improve nutrient uptake, reduce plant stress, and increase yields.



## Albit: In-Furrow During Planting

- Stimulates Sprouting
- Accelerates Root Development
- Increase Sprout Emergence
- Enhances Stem Numbers from 2 to 3 per Plant







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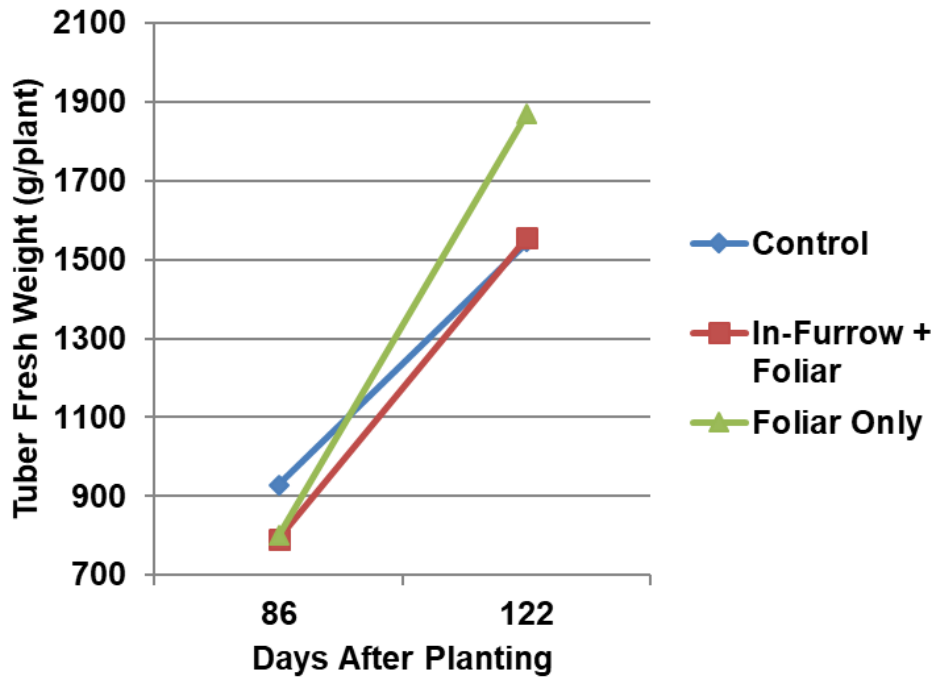


Fig 1: Effect of **Albit** application on tuber bulking of Canela Russet

## Albit: Foliar Treatment – Increase Tuber Bulking (100 DAP)

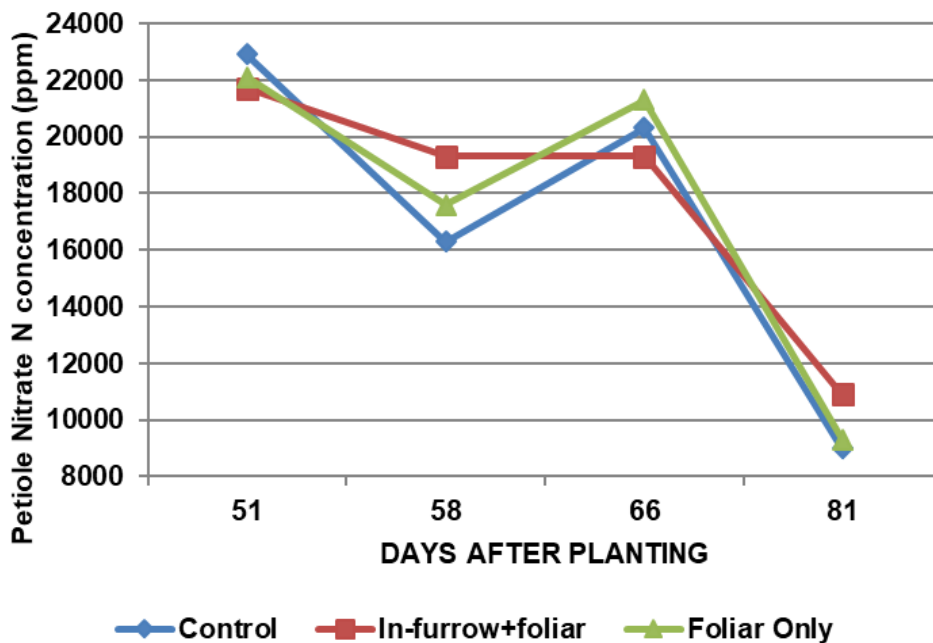




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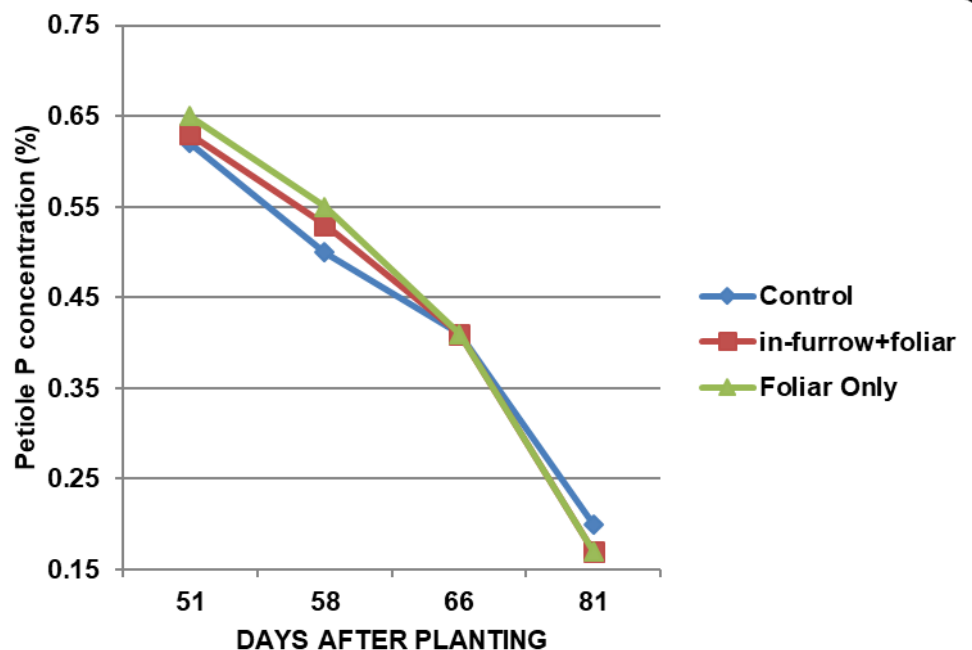
...is an effective program on potatoes to enhance tuber development, improve nutrient uptake, reduce plant stress, and increase yields.



Effect of **Albit** application on nitrate nitrogen

## Albit: Effect on Macro and Micronutrient Uptake

Effect of **Albit** application on soil phosphorus uptake

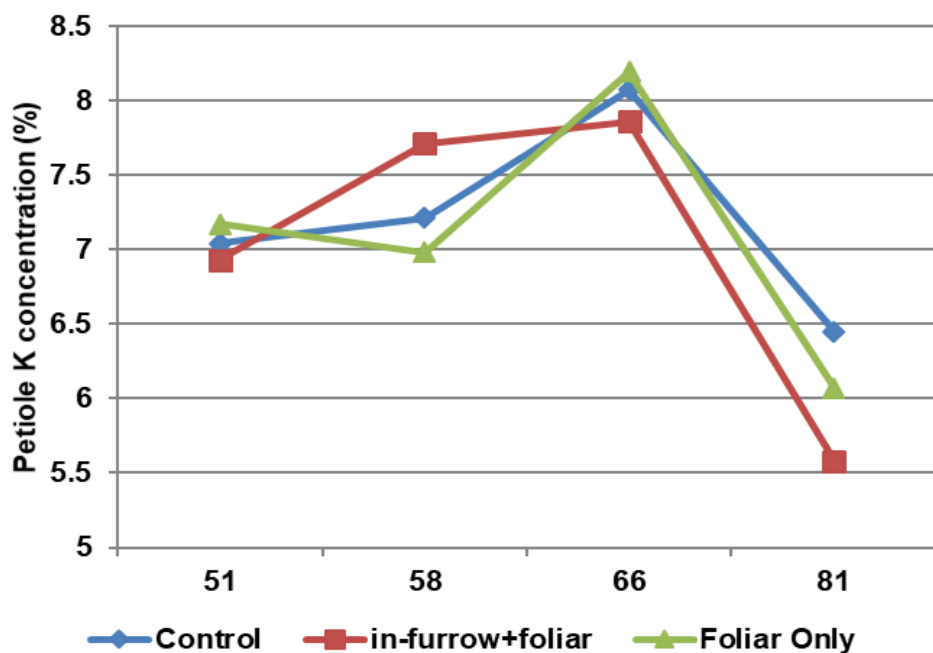




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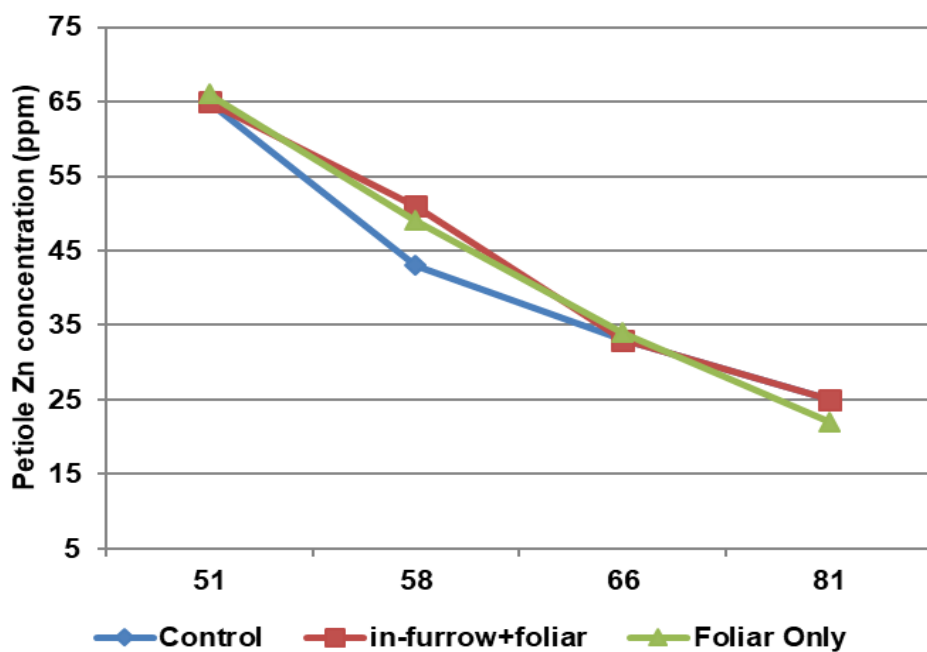
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Effect of **Albit** application on soil potassium uptake

## Albit: Effect on Macro and Micronutrient Uptake

Effect of **Albit** application on zinc uptake

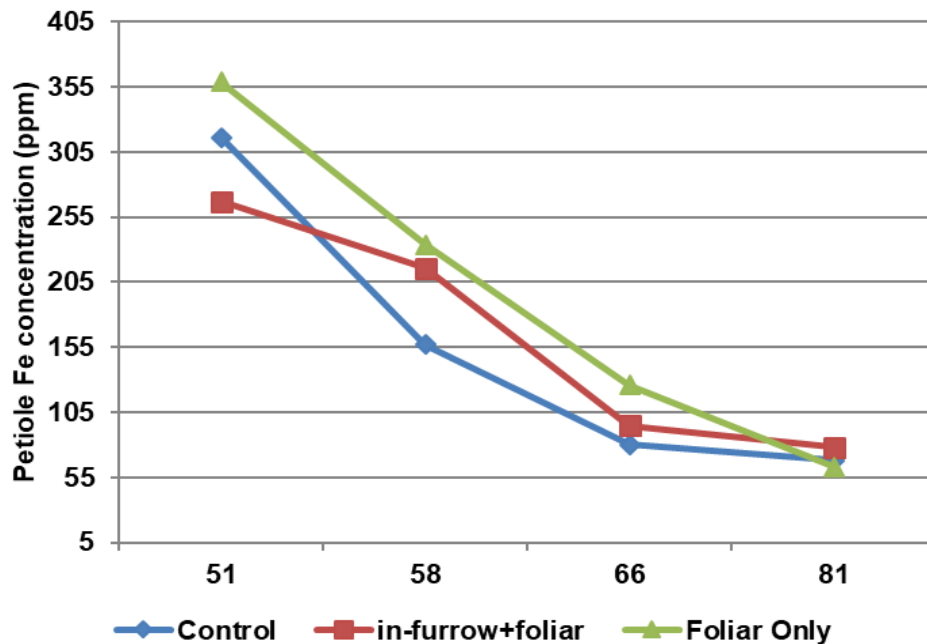




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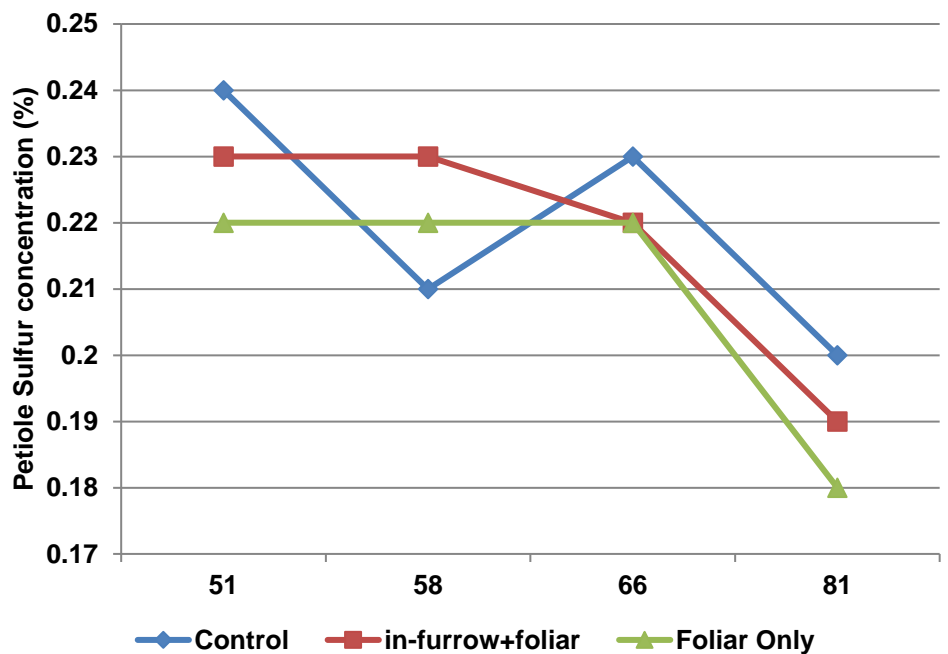
...is an effective program on potatoes to enhance tuber development, improve nutrient uptake, reduce plant stress, and increase yields.



Effect of **Albit**  
application on iron  
uptake

## Albit: Effect on Macro and Micronutrient Uptake

Effect of **Albit**  
application on  
sulfur uptake



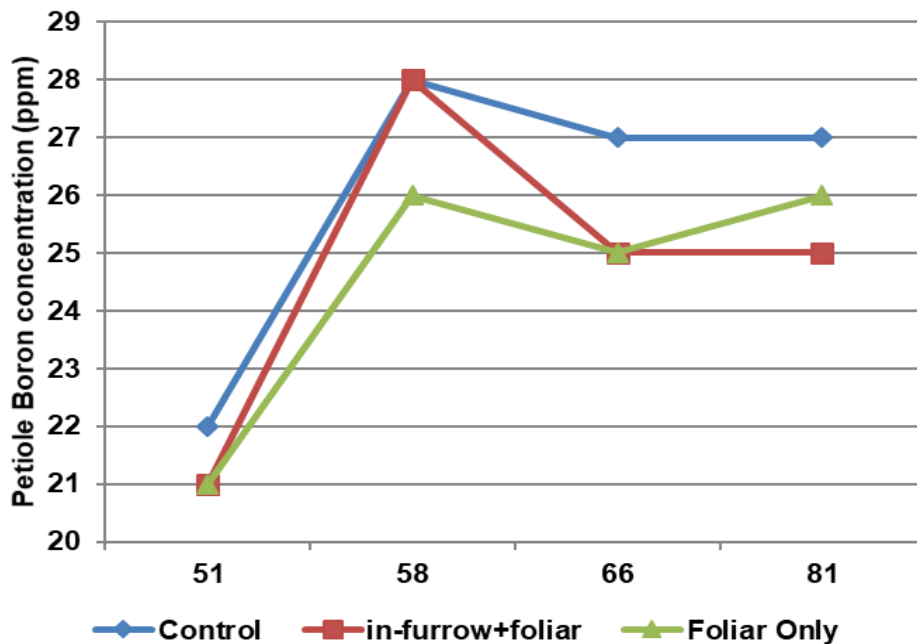




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Effect of **Albit**  
application boron  
uptake

## Nutrient Uptake

Albit was observed to **influence** the **uptake** of **macro and micronutrients**, mostly **during early tuber bulking**. It was interesting to note that application of **Albit** could **regulate** the uptake of **micronutrients** such as **boron** so as not to reach **toxicity levels** in the plant.



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## Results and Discussion

### *Stem Numbers and Tuber Set*

Application of **Albit** increased stem number of Canela Russet from **2 stems** per plant to **3 stems** per plant. **Tuber set** of Canela Russet was increased from **7 tubers** per plant to **8 and 10 tubers** per plant for “**foliar only**” and “**in-furrow + foliar**” treatments, respectively. This finding is very significant for Russet potatoes that have a drawback of producing fewer stem and tuber numbers.

### *Tuber Bulking*

“**Foliar only**” treatment enhanced tuber bulking, as evidenced by the increased tuber fresh weight at the mid to late tuber bulking stage [from 100 days after planting (DAP)] – **Fig 1**.

### *Tuber Yield and Tuber Size Distribution*

Total and marketable tuber yields responded positively to supplemental **Albit** application. Application of **Albit** increased total tuber yield by **8% and 4%**, for “**foliar only**” and “**in-furrow + foliar**” treatments, respectively. “**Foliar only**” application of **Albit** increased marketable (> 4 oz.), large size marketable (> 6 oz.), and medium size (4-10 oz.) tubers by **9%, 7%, and 16%**, respectively.

### *Tuber Quality*

Application of **Albit** resulted in **no tuber external defects** in this study. Where **no Albit** was applied, it was observed that **1.1% of the tubers showed external defects**. Tuber specific gravity was not impacted by the treatments in this study.

## Bulk Marketable Result

Improvement in yield 3 200 lbs./ac @ \$ 9.75/100 lbs. = \$ 312/ac

## Return on Investment

For every 1 DOLLAR SPENT there was a 13 DOLLAR RETURN

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